

CLAIMS

1. A system (1) for suppressing audio distortion, comprising:
 - echo cancelling means (g_1, g_2) coupled between an audio output (4) and a distorted desired audio sensing microphone array (3), and
 - a filter arrangement (7, 7A) coupled to the echo cancelling means (g_1, g_2)
- 5 and/or the microphone array (3), the filter arrangement including filter (7A) coefficients ($w; w_1, w_2$) representing reverberation distortion in the desired audio sensed by the microphone array (3).
2. The system (1) according to claim 1, wherein the filter arrangement (7) includes a beamformer (7B) having at least a filter and sum beamformer and/or a delay and sum beamformer.
- 10 3. The system (1) according to claim 1, wherein the filter arrangement (7A) is arranged to be adaptive to the reverberation distortion and/or the desired audio signal sensed by the microphone array (3).
- 15 4. The system (1) according to claim 1, wherein the system (1) is arranged for updating the filter (7A) coefficients ($w; w_1, w_2$) in case the reverberation not cancelled by the echo cancelling means (g_1, g_2) dominates the audio signal sensed by the microphone array (3).
- 20 5. The system (1) according to claim 1, wherein the system (1) is arranged for updating the filter (7A) coefficients ($w; w_1, w_2$) during a training session.
- 25 6. The system (1) according to claim 1, wherein the system (1) is provided with automated filter coefficient update control means (13) coupled to at least the filter arrangement (7A).

7. The system (1) according to claim 1, wherein the filter arrangement (7) has an output (S), and the system (1) comprises output echo canceller means (g_3) coupled between the filter output (S) and the audio output (4).
- 5 8. The system (1) according to claim 7, wherein the automated filter coefficient update control means (13) are further coupled to the output echo canceller means (g_3) for controlling the update speed of the filter arrangement (7).
9. The system (1) according to claim 1, wherein each microphone (3-i, $i = 1, 2, \dots, n$) of the microphone array (3) has its individual echo cancelling means (g_i , $i = 1, 2, \dots, n$).
- 10 10. A filter arrangement (7) for use in the system (1) according to any one of the claims 1-9.